

Title (en)

SINGLE SENSOR-BASED DUAL-SPECTRAL CAMERA SYSTEM AND IMAGE PROCESSING METHOD

Title (de)

AUF EINZELSENSOR BASIERENDES DOPPELSPEKTRALES KAMERASYSTEM UND BILDVERARBEITUNGSVERFAHREN

Title (fr)

SYSTÈME DE CAMÉRA À DOUBLE SPECTRE BASÉ SUR UN CAPTEUR UNIQUE ET PROCÉDÉ DE TRAITEMENT D'IMAGE

Publication

**EP 3751833 A1 20201216 (EN)**

Application

**EP 18904907 A 20181017**

Priority

- CN 201810143997 A 20180211
- CN 2018110685 W 20181017

Abstract (en)

Provided are a dual-spectrum camera system based on a single sensor and an image processing method which relate to the technical field of imaging capturing and processing. The camera system includes a lens, an image sensor, and a logical light separation module and an image fusion module that are sequentially connected to the image sensor. The image sensor includes red-green-blue (RGB) photosensitive cells and infrared radiation (IR) photosensitive cells. An infrared cut-off filter layer is arranged on a light incoming path of the RGB photosensitive cells. The image sensor receives incident light entering through the lens to generate an original image and sends the original image to the logical light separation module. The logical light separation module converts and separates the original image into a visible light image and an infrared image, and sends the visible light image and the infrared image to the image fusion module to generate a fused image. An object of embodiments of the present invention is to provide a dual-spectrum camera system based on a single sensor and an image processing method, so as to simplify an optical structure of the dual-spectrum camera system, thereby facilitating miniaturization of the camera apparatus, reducing the cost, and improving the image effect.

IPC 8 full level

**H04N 5/225** (2006.01); **H04N 5/235** (2006.01); **H04N 5/265** (2006.01)

CPC (source: CN EP US)

**H04N 5/265** (2013.01 - CN); **H04N 23/11** (2023.01 - CN EP US); **H04N 23/50** (2023.01 - CN); **H04N 23/54** (2023.01 - CN US); **H04N 23/55** (2023.01 - CN); **H04N 23/71** (2023.01 - EP US); **H04N 23/72** (2023.01 - CN EP); **H04N 23/73** (2023.01 - EP); **H04N 23/74** (2023.01 - EP); **H04N 23/75** (2023.01 - EP); **H04N 23/76** (2023.01 - EP); **H04N 23/843** (2023.01 - EP); **H04N 23/95** (2023.01 - CN EP); **H04N 25/131** (2023.01 - EP); **H04N 25/705** (2023.01 - US); **H04N 23/72** (2023.01 - US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3751833 A1 20201216**; **EP 3751833 A4 20210922**; **EP 3751833 B1 20230712**; **EP 3751833 C0 20230712**; CN 108965654 A 20181207; CN 108965654 B 20201225; ES 2953107 T3 20231108; HU E063697 T2 20240128; PL 3751833 T3 20231218; US 11252345 B2 20220215; US 2021044763 A1 20210211; WO 2019153787 A1 20190815

DOCDB simple family (application)

**EP 18904907 A 20181017**; CN 201810143997 A 20180211; CN 2018110685 W 20181017; ES 18904907 T 20181017; HU E18904907 A 20181017; PL 18904907 T 20181017; US 201816965832 A 20181017